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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| 09/045,385 | 03/20/98 | MATSUSHIMA | Y 48240 |

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EXAMINER

EISENHUT, H

ART UNIT

PAPER NUMBER

2871

10

DATE MAILED: 02/03/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/045,385

Applicant(s)

Matushima et al

Examiner

Heldl Eisenhut

Group Art Unit

2871



☒ Responsive to communication(s) filed on Nov 3, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-17 is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-17 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Acknowledgement is made of Applicant's indication of submission of an amendment to the drawings. However, this amendment is not in the case file and thus not approved at this time.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 6 recites the limitation "the plurality of colored layers" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohgawara et al, US Patent #5,617,230 in view of Kadota et al, US Patent #5,818,550.

Ohgawara et al disclose substrates with a liquid crystal layer in between (see column 9, lines 25-30) wherein the first substrate includes a plurality of color filters (3) and a light

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shielding layer (26) around the periphery of the display region which includes a plurality of colored layers of different colors. Ohgawara et al fail to disclose a plurality of picture element electrodes connected to a plurality of switching elements with a light shielding layer on the switching elements. However, it is well known in the art to use picture element electrodes connected to switching elements for several advantageous reasons including reducing cross talk. It would have been obvious to one of ordinary skill in the art at the time of the invention to use picture element electrodes connected to switching elements, since it reduces cross talk. With regards to a light shielding layer on the switching elements, Kadota et al disclose using a light shielding layer on the switching elements to shield the switching element from light. (See column 4, lines 50-55) It would have been obvious to one of ordinary skill in the art at the time of the invention to use a light shielding layer on the switching elements to shield the switching elements from light. With regards to the limitation of no gap between each picture electrode at the periphery of the display region and the light shielding frame layer, it is well known to not have a gap between the picture electrodes at the periphery of the display region and the light shielding frame layer to prevent light leakage which would deteriorate the display image. It would have been obvious to one of ordinary skill in the art at the time of the invention to not have a gap between the picture electrodes at the periphery of the display region and the light shielding frame layer, since it prevents light leakage which deteriorates the display image.

Regarding claim 3, it is well known in the art to make components, specifically the light shielding layer and the light shielding frame layer in this case, of the same material to reduce

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manufacturing costs. It would have been obvious to one of ordinary skill in the art at the time of the invention make the light shielding layer and the light shielding frame layer out of the same material to reduce manufacturing costs.

Regarding claims 4 and 14, Ohgawara et al and Kadota et al fail to disclose forming the light shielding layers and light shielding frame through an electrochemical process. However, this is a product by process limitation and is not patentably distinctive. This limitation does not distinguish over the prior art because no distinct product was produced.

Regarding claims 7-8 and 16, Ohgawara et al and Kadota et al fail to specifically disclose a driving circuit for driving the switching elements. However, switching elements require a driving circuit in order to function and is thus inherent. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a driving circuit for driving the switching elements, since this an inherent feature of active matrix liquid crystal displays.

Response to Arguments

5. Applicant argues that there is no motivation to modify the Kadota reference because it addresses different problems than the claimed invention. However, there is no reference in the claims as to what problem is being solved. As such, the Kodota reference can be used.

With respect to Applicant's other arguments, they have been considered but are moot in view of the new ground(s) of rejection.

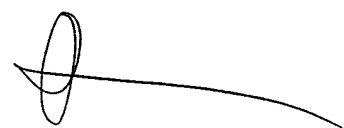
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Conclusion

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Examiner Heidi Eisenhut whose telephone number is 703-305-0850.

H. Eisenhut *H. E.*

January 28, 2000


Kenneth Parker
Patent Examiner
Technology Center 2800